UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Ref: 8WP

Dr. Larry Wolk
Executive Director
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive S.
Denver, Colorado 80246

Re: Optimal Corrosion Control Treatment Designation for Denver Water

Dear Dr. Wolk:

The Colorado Department of Public Health and Environment (CDPHE) has requested our input with respect the Optimal Corrosion Control Treatment (OCCT) for Denver Water system. As you know CDPHE is the primacy agency for such decisions in Colorado and is responsible for making this determination, and the Region 8 Environmental Protection Agency is responsible for reviewing that decision once it is made final. The standard of review is established by regulation and allows the EPA to substitute its findings for the state's if:

1. A state has failed to issue a treatment determination by the application deadlines in regulation;
2. A state has abused its discretion in a substantial number of cases or in cases affecting a substantial population; or
3. The technical aspects of a state's determination would be indefensible in an expected federal enforcement action taken against the system.

These standards will guide our review of the final decision by the State of Colorado, and we reserve the right to review the State's designation and to instead issue a federal treatment determination. With that caveat and after having reviewed both the OCCT Report issued by Denver Water along with the letter and memorandum submitted by the Metro Wastewater Reclamation District we see no conflict between the above standards of review and CDPHE determining that orthophosphate is the OCCT for Denver Water. Below we have also provided a technical review of the documents submitted by Denver Water and Metro Wastewater and we share this background with you to use in your regulatory review of this matter as appropriate.

In the 1991 Lead and Copper Rule (LCR), OCCT is defined as "the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water system to violate any national primary drinking water regulations." (40 CFR § 141.2) Consideration of other factors such as cost and watershed impacts, including nutrient levels, are not explicitly mentioned in the OCCT definition. While the LCR preamble and guidance discuss potential considerations related to secondary impacts of OCCT, these other factors are only relevant when OCCT options provide equivalent reductions in lead levels. The OCCT definition makes clear that the priority

for states in designating OCCT is minimizing lead levels at the tap while maintaining compliance with the other National Primary Drinking Water Regulations.

We have reviewed Denver Water's OCCT Report and have the following observations. Our reading of the Report is that orthophosphate treatment yielded significantly greater lead reductions than pH and alkalinity adjustment. The report further demonstrated that the use of orthophosphate is not expected to cause other drinking water violations or public health issues within the Denver Water distribution system, including their consecutive systems. These findings are consistent with the EPA's experience working with similar systems nationally to evaluate corrosion control options. Also, because Denver Water uses chloramine as a secondary disinfectant, it can be expected that orthophosphate will more effectively reduce lead levels system-wide than would pH and alkalinity adjustment.

It should also be noted that Lead Service Lines (LSL) pose the greatest risk of lead exposure via drinking water. Therefore, it is critical for water systems to carry out LSL replacement programs. However, these programs do not address other sources of lead in drinking water such as copper pipes with lead solder, galvanized pipe that adsorbs lead from upstream lead pipes, and premise plumbing inside the home (i.e. leaded faucets). Consumers need to be protected from all sources of lead in drinking water, and effective OCCT addresses all sources of lead in the distribution system to achieve equitable public health protection for all consumers. The EPA fully supports Denver Water's voluntary lead service line replacement program, and encourages them to continue these efforts in the future.

Denver Water, the Metro Wastewater Reclamation District, and other stakeholders in the South Platte Watershed have raised concerns about adverse secondary effects on wastewater treatment systems and downstream water quality from the increased phosphorus loads that would result from Denver Water's use of orthophosphate. The EPA agrees that reducing nutrient loadings is an important water quality objective. To address this concern, once CDPHE designates OCCT the EPA encourages CDPHE to work with Denver Water to further evaluate whether a lower orthophosphate dose in combination with increased pH or silicate would yield equivalent reductions in lead levels as the higher orthophosphate dose previously tested. If successful, a lower orthophosphate dose would help reduce nutrient impacts to watersheds and possibly reduce operational costs.

We appreciate coordinating with your staff on this issue. Please let me know if you would like to further discuss this important matter.

Sincerely,

Douglas H. Benevento
Regional Administrator

cc: Ms. Martha Rudolph, Director of Environmental Programs
Mr. Patrick Pfaltzgraff, Director, Water Quality Control Division
Mr. Ron Falco, Manager, Drinking Water Program